IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

David CHINNER et al.

Serial No. 10/620,797   Group Art Unit: 2163

Confirmation No. 8455

Filed: July 17, 2003   Examiner: Helene Roberta Rose

For: NETWORK FILESYSTEM ASYNCHRONOUS I/O SCHEDULING

APPEAL BRIEF

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

I. Real Party in Interest

The inventors, David CHINNER and Michael Anthony GIGANTE, assigned all rights in the subject application to SILICON GRAPHICS, INC. on September 15, 2003 according to the Assignment executed September 15, 2003 and submitted for recordation on November 3, 2003 which is recorded at Reel 14654, Frames 332-334. Therefore, the real party in interest is SILICON GRAPHICS, INC.

II. Related Appeals and Interferences

There are no related appeals or interferences known to Appellants, Appellants' legal representatives or the Assignee, SILICON GRAPHICS, INC., which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status of Claims

Claims 1-28 are pending in the application; claims 1-28 stand rejected under 35 USC § 103(a) and claims 1-28 are being appealed.

IV. Status of Amendments

No Amendment was filed in response to the May 15, 2007 Office Action.

V. Summary of Claimed Subject Matter

As recited in claim 1, the present invention is directed to a "method of processing resource acquisition requests" (claim 1, line 1) as described, for example in paragraphs [0003] to [0005] and [0016] to [0018] and as illustrated in Fig. 2. This method includes "scheduling execution of the resource acquisition requests in accordance with user configurable metering" (claim 1, lines 2-3), as described, for example, in paragraphs [0014] to [0024] and as illustrated in Fig. 2.

As recited in claim 2, the present invention also includes "sorting the resource acquisition requests into at least two separate queues for different request types" as described, for example, in paragraph [0016] and as represented by block 28 in Fig. 2.

As recited in claim 11, the present invention includes "[a]t least one computer readable medium storing at least one program embodying a method of processing requests to access computing resources" (claim 11, lines 1-2), as described, for example, in paragraphs [0003] to [0005] and [0016] to [0018] and as illustrated in Fig. 2. As in the case of claim 1, the method embodied on the at least one computer readable medium includes "scheduling execution of the resource acquisition requests in accordance with user configurable metering" (claim 11, lines 3-4), as described, for example, in paragraphs [0014] to [0024] and as illustrated in Fig. 2.

As recited in claim 12, the present invention also includes "sorting the resource acquisition requests into at least two separate queues for different request types" as described, for example, in paragraph [0016] and as represented by block 28 in Fig. 2.

As recited in claim 20, the present invention includes a "computer system that processes resource acquisition requests" (claim 20, line 1), as described, for example, in paragraphs [0012] and [0013] and as illustrated in Fig. 1. This system includes "at least one processor programmed to schedule execution of the resource acquisition requests in accordance with user configurable metering" (claim 20, lines 2-3), as described, for example, in paragraphs [0014] to [0024] and as illustrated in Fig. 2. Although there is no description of the processor in the specification, one of ordinary skill in the art would understand that a client node like "client node 10 .. connected via network 12 to at least one filesystem server" (second sentence of paragraph [0012]) would include a processor.

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As recited in claim 21, the "at least one processor is further programmed to sort the resource acquisition requests into at least two separate queues for different request types" as described, for example, in paragraph [0016] and as represented by block 28 in Fig. 2.

VI. Grounds of Rejection to be Reviewed on Appeal

In the final Office Action dated May 15, 2007, the Examiner rejected claims 1-28 under 35 USC § 103(a) as unpatentable over U.S. Patent 6,971,101 to Clayton et al. in view of U.S. Patent 6,092,048 to Nakaoka (References A and C, respectively). At issue is whether Clayton et al. and Nakaoka teach or suggest all of the limitations recited in the claims.

VII. Argument

Independent Claims 1, 11 and 20

In rejecting claims 1, 11 and 20, it was acknowledged that Clayton et al. "does not disclose ... user configurable metering" (May 15, 2007 Office Action, page 3, lines 5-6) as recited in the independent claims. This acknowledgment was apparently confirmed in the "Examiner Response" on pages 10-19 of the May 15, 2007 Office Action. The paragraph that starts on page 10 and ends on page 12 asserted that column 5, lines 4-45 of Clayton et al. describes activities "equivalent to 'scheduling execution of the resource acquisition request'" (May 15, 2007 Office Action, page 12, lines 3-4), but does not cite any suggestion in Clayton et al. of doing so "in accordance with user configurable metering" as required by the independent claims.

Due to the lack of relevant disclosure in Clayton et al., the May 15, 2007 Office Action at page 3, lines 7-17 asserted that Nakaoka "discloses ... user configurable metering" (May 15, 2007 Office Action, page 3, line 7) in the Abstract, Fig. 25 and column 8, lines 37-65. Specifically, page 3, lines 8-14 of the May 15, 2007 Office Action used most of the words on the last ten lines of the Abstract in Nakaoka without any quotation marks. This paragraph of the May 15, 2007 Office Action concluded by asserting that incorporation of what is disclosed by Nakaoka into the system taught by Clayton et al. would have been obvious "for a faster execution, and efficiency for processing numerous amounts of requests that may be made by a user" (Office Action, page 3, lines 20-21).

First, Appellants want to clarify that the statement on page 3, lines 15-17 of the May 15, 2007 Office Action that "defined in the applicant's remarks on page 7, the ... 'user configurable metering' would be the ability of a user to configure how the focus manager determines the number of request[s] of a given priority should be executed, Nakoma" is not related to any

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admission made by Appellants during prosecution. All of the words except "Nakoma" (which is assumed to be a reference to Nakaoka) in this quotation, including the quotation marks, appear on page 6 of the Response filed February 28, 2007 as a quotation of page 3, lines 13-15 in the September 29, 2006 Office Action. This statement in the September 29, 2006 Office Action apparently related to the arguments on page 7 of the Amendment filed July 11, 2006. However, the words on page 3, lines 13-15 of the September 29, 2006 Office Action, do not appear on page 7 of the July 11, 2006 Amendment. In fact, page 7 of the July 11, 2006 only discusses Clayton et al. Therefore, Appellants can only conclude that the statement on page 3, lines 15-17 of the May 15, 2007 Office Action was intended to be a summary of the Examiner's assertion that what is missing in Clayton et al. is taught by Nakaoka.

It is submitted that Nakaoka fails to overcome the acknowledged lack of teaching or suggestion in Clayton et al. that a user can configure how the "focus manager 206" determines the number of requests of a given priority should be executed. The Examiner apparently believes that the statement in the Abstract of Nakaoka that the "task execution support system supports the user such that the user can execute a task while determining the contents ... and ... procedure ... in accordance with ... progress of ... [the] task without defining a ... procedure from the start to end of a task" (Abstract, lines 7-12) would suggest modification of Clayton et al. to meet the limitations recited in the independent claims. However, the Abstract of Nakaoka appears to be talking about a system that simplifies defining the procedure performed as a task by people. This does not seem to have anything to do with determining the number of requests of a given priority that should be executed by the focus manager 206 in Clayton et al., or doing anything "in accordance with user configurable metering" (e.g., claim 1, last 2 lines).

Apparently in response to the arguments in the preceding paragraph, the paragraph spanning pages 12 and 13 of the May 15, 2007 Office Action cited columns 3 and 4 of Nakaoka as allegedly disclosing "user configurable metering" by disclosing that "a task execution respon- sible person who is in charge of the execution of the task for each task entry" (May 15, 2007 Office Action, page 13, lines 5-6) "can create a task entry and can create the work entry expres- sing the work decided at that time and the event rule expressing the work procedure for the task and ... can manage the progress of the task" (Office Action, page 12, last line to page 13, line 3). For the reasons discussed below, it is submitted that what is disclosed by Nakaoka is too significantly different from both what is disclosed by Clayton et al. and what is recited in the claims to provide any suggestion for modification of Clayton et al. to overcome the deficiencies thereof acknowledged in the May 15, 2007 Office Action.

In addition, Fig. 25 of Nakaoka, which is described in the cited portion of column 8 and presumably was cited as illustrating the sentences in the Abstract of Nakaoka cited in the rejection, appears to show the ability of a user to select a task from task list 1520 and the ability to display a task property in section 1530 and a task action in section 1540. Nothing has been found in Fig. 25 or its description in the cited portion of column 8 that suggests any modification of Clayton et al. to provide for user configuration of the focus manager 206.

Variations in Definitions Provided by Claims 1, 11 and 21

It is submitted that the "tasks" in Nakaoka are not equivalent to "resource acquisition requests" as that term is used in the subject application. A task in Nakaoka is a well-defined set of operations that a set of workers carry out, and the closest equivalent to "user configurable metering" that can be found in Nakaoka seems to relate to the manager of the task assigning operations to workers. This is not equivalent to "user configurable metering" of "resource acquisition requests" as those terms are defined in the subject application. The "resource acquisition requests" are described as being "stored in one or more queues upon receipt while they await execution by a process that controls access to … [a computer] filesystem" (see, paragraph [0004]). Even if the Patent and Trademark Office refuses to define "resource acquisition requests" in claim 1 consistently with the specification, claim 11 provides a definition in the preamble, "processing requests to access computing resources" and the body of claim 20 requires a "processor programmed to schedule execution of the resource acquisition requests". Therefore, claims 11 and 20 require on their face a different meaning of "resource acquisition requests" than what is disclosed or suggested in Nakaoka.

Lack of Motivation to Combine

Furthermore, it is submitted that the assertion at page 14, lines 1-6 of the May 15, 2007 Office Action that column 12, lines 4-7 of Nakaoka provides motivation "for establishing an improved method of improving the efficiency of the system by enhancing the query performance by utilizing an administrator to delegate and operate resources" is clearly an application of hindsight. The Examiner has not cited anything in the prior art that suggests anything to connect the teachings of Clayton et al. and Nakaoka or that would lead one of ordinary skill in the art to modify what is taught in Clayton et al. based on Nakaoka to meet the limitations recited in the claims. It is submitted that these references are related to such completely different ways of performing tasks that anyone would only consider them together after conducting a word search of U.S. patents based on reading the subject application.

Summary

For the above reasons, it is submitted that claims 1, 11 and 20, as well as claims 2-10, 12-19 and 21-28 which depend therefrom, patentably distinguish over Clayton et al. in view of Nakaoka.

Dependent Claims 2-10, 12-19 and 21-28

In rejecting claims 2, 12 and 21, Figs. 7 and 8 and portions of columns 5, 6, 8 and 10 of Nakaoka were cited. The addition of these portions of the disclosure in Nakaoka does not provide any suggestion for combining Nakaoka and Clayton et al. Figure 7 is described as "an event condition table" (column 6, line 61) and indicates that tasks are targets of events which have various types and may be associated with a title of a target object. The portion of the description of Fig. 7 cited at column 10, lines 45-59 states that the fields in the first column are identifiers, and the fields in the remaining three columns either represent or express "the time that the event condition wants to indicate" (e.g., column 10, lines 50-51). As noted above and in the February 28, 2007 Response and the July 10, 2006 Amendment, one aspect of the invention missing from Clayton et al. is providing a way for a user to configure how the focus manager determines the number of requests of a given priority should be executed. It is submitted that something which expresses or represents "the time that the event condition wants to indicate" does not teach or suggest what is missing from Clayton et al. Furthermore, it is submitted that Fig. 7 and column 10, lines 45-59 of Nakaoka do not contain any suggestion of sorting "the resource acquisition requests into at least two separate queues" as recited in claims 2, 12 and 21. The fact that the sorting in claims 2, 12 and 21 is performed based on "different request types" is hardly suggested by the listing of event types in an event condition table.

The paragraph spanning pages 16 and 17 and the only full paragraph on page 17 of the May 15, 2007 Office Action were apparently in response to the arguments in the preceding paragraph. It is submitted that the repeated citation of Fig. 7 and column 10, lines 45-59 of Nakaoka in the paragraph spanning pages 16 and 17 of the May 15, 2007 Office Action does not overcome the arguments provided above and in the February 28, 2007 Response that there is no disclosure by Nakaoka of "resource acquisition requests" as defined by claims 11 and 20 (and the specification for claim 1). Rather, what is disclosed by Nakaoka are "tasks" performed by people and what the Examiner is relying on as "types" of requests is defined in Nakaoka as "represent[ing] the time that the event condition wants to indicate" (column 10, lines 50-51). That is not equivalent to a type of resource acquisition request as defined in the claims and specification of this application.

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At page 17, lines 3-5, the May 15, 2007 Office Action noted that the Summary of the Invention section of <u>Nakaoka</u> states, the "task can be hierarchized by the main task and subtask structure based on an object among the tasks" (column 6, lines 40-41). However, that does not suggest, "sorting the resource acquisition requests into at least two separate queues for different request types" as recited in claims 2, 11 and 21, because nothing has been cited in the prior art suggesting to one of ordinary skill in the art that "main task and subtask structure" is equivalent to "different request types."

For all of the above reasons, it is submitted that claims 2, 12 and 21, as well as claims 3-10, 13-19 and 22-28 which depend therefrom, further patentably distinguish over <u>Clayton et al.</u> in view of <u>Nakaoka</u>.

Unrebutted Arguments

At page 18, lines 2-8, the May 15, 2007 Office Action apparently acknowledged that some of the arguments in the February 28, 2007 Response were not addressed. Following are arguments from the February 28, 2007 Response for which no response could be found in the May 15, 2007 Office Action. It is submitted that these arguments "clearly specif[y what] ... the ... 'prior art does not teach or suggest'" (May 15, 2007 Office Action, page 18, lines 5-6) and do not constitute "'blanket statements'" (May 15, 2007 Office Action, page 18, line 8). The Board of Patent Appeals and Interferences is respectfully requested to consider the following arguments for which the Examiner has provided no response.

Figure 8 and column 5, lines 49-67 of <u>Nakaoka</u> were apparently cited in rejecting claims 2, 12 and 21 to show how the event types are defined. However, the list of event types in Fig. 8 do not seem to have anything to do with either "resource acquisition requests" as recited in claims 2, 12 and 21 or the focus manager 206 in <u>Clayton et al.</u> which the Examiner has acknowledged needs to be modified to meet the limitations in claims 1, 11 and 20. While column 5 of <u>Nakaoka</u> does mention "the task is classified based on the task definition, according to the method of classifying the task based on the object information" (column 5, lines 57-60), no suggestion has been found that tasks can be equated with "resource acquisition requests" or that the classification described in <u>Nakaoka</u> constitutes sorting based on "different request types" as recited in claims 2, 12 and 21.

The same lack of suggestion to modify the focus manager 206 in <u>Clayton et al.</u> or sort resource acquisition requests, is provided by the description of creating "new task entries ... to write respective chapters" (Office Action, page 4, lines 15-16) which apparently is what was

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considered relevant in column 6, lines 17-20 of <u>Nakaoka</u> and by reading "task information ... to change memorized task information in accordance with a task information reference/operation request issued from the task information display/operation unit 1030 or the event rule driver unit 1040" (Office Action, page 4, lines 17-20) which apparently is what was considered relevant in column 8, lines 4-12 of <u>Nakaoka</u>.

The wording of the rejection of the remaining claims, 3-10, 13-19 and 22-28, was unchanged from the January 11, 2006 Office Action, except for the addition of the words "in view of Nakaoka" in regard to all of the rejections, except the rejection of claims 5, 15 and 24. It is submitted that that the additional distinctions over the prior art due to the lack of equivalence between the present invention and <u>Clayton et al.</u> discussed in the July 11, 2006 Amendment also apply to the rejections based on <u>Clayton et al.</u> and <u>Nakaoka</u>.

Conclusion

For the reasons set forth above and in the February 28, 2007 Response and the July 11, 2006 Amendment, it is submitted that claims 1-28 patentably distinguish over <u>Clayton et al.</u> and <u>Nakaoka</u>. Thus, it is respectfully submitted that the Examiner's final rejection of the claims is without support and, therefore, erroneous. Accordingly, the Board of Patent Appeals and Interferences is respectfully urged to so find and to reverse the Examiner's final rejection.

Please charge the required fee in the amount of $510.00 to our Deposit Account No. 19-3935. If any additional fees are required, please charge same to our Deposit Account No. 19-3935.

Respectfully submitted,

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VIII. Claims Appendix

1. A method of processing resource acquisition requests, comprising:

scheduling execution of the resource acquisition requests in accordance with user configurable metering.

2. A method as recited in claim 1, further comprising sorting the resource acquisition requests into at least two separate queues for different request types.

3. A method as recited in claim 2, further comprising configuring metering of the resource acquisition requests in response to input from an administrator of the system.

4. A method as recited in claim 3, wherein said configuring includes specifying a first number of the resource acquisition requests from a first queue to be performed for a second number of the resource acquisition requests from a second queue, as long as the resource acquisition requests are queued in both the first and second queues.

5. A method as recited in claim 4, wherein said configuring includes specifying a corresponding number of the resource acquisition requests to be executed for each of the at least two separate queues when more than two of the separate queues are provided.

6. A method as recited in claim 4, further comprising establishing a maximum number of threads for executing resource acquisition requests in response to the input from the administrator.

7. A method as recited in claim 6, wherein the maximum number of threads for executing resource acquisition requests is at least as large as a sum of the first and second numbers.

8. A method as recited in claim 7, wherein the first and second numbers are each larger than one.

9. A method as recited in claim 8, wherein a default metering is used when no input is received from the administrator.

10. A method as recited in claim 9, wherein the first queue is for read requests, the second queue is for write requests and the default metering is two read requests for two write requests executed by four threads.

11. At least one computer readable medium storing at least one program embodying a method of processing requests to access computing resources, said method comprising:

scheduling execution of the resource acquisition requests in accordance with user configurable metering.

12. At least one computer readable medium as recited in claim 11, further comprising sorting the resource acquisition requests into at least two separate queues for different request types.

13. At least one computer readable medium as recited in claim 12, further comprising configuring metering of the resource acquisition requests in response to input from an administrator of the system.

14. At least one computer readable medium as recited in claim 13, wherein said configuring includes specifying a first number of the resource acquisition requests from a first queue to be performed for a second number of the resource acquisition requests from a second queue, as long as the resource acquisition requests are queued in both the first and second queues.

15. At least one computer readable medium as recited in claim 14, wherein said configuring includes specifying a corresponding number of the resource acquisition requests to be executed for each of the at least two separate queues when more than two of the separate queues are provided.

16. At least one computer readable medium as recited in claim 14, further comprising establishing a maximum number of threads for executing resource acquisition requests in response to the input from the administrator.

17. At least one computer readable medium as recited in claim 16, wherein the maximum number of threads for executing resource acquisition requests is at least as large as a

sum of the first and second numbers.

18. At least one computer readable medium as recited in claim 17, wherein the first and second numbers are each larger than one.

19. At least one computer readable medium as recited in claim 18, wherein a default metering is used when no input is received from the administrator.

20. A computer system that processes resource acquisition requests, comprising:
at least one processor programmed to schedule execution of the resource acquisition requests in accordance with user configurable metering.

21. A computer system as recited in claim 20, wherein said at least one processor is further programmed to sort the resource acquisition requests into at least two separate queues for different request types.

22. A computer system as recited in claim 21,
further comprising an input unit to receive input from an administrator of the system, and
wherein said at least one processor is further programmed to configure metering of the resource acquisition requests in response to the input from the administrator of the system.

23. A computer system as recited in claim 22, wherein said at least one processor is further programmed to specify a first number of the resource acquisition requests from a first queue to be performed for a second number of the resource acquisition requests from a second queue, as long as the resource acquisition requests are queued in both the first and second queues.

24. A computer system as recited in claim 23, wherein said at least one processor is further programmed to specify a corresponding number of the resource acquisition requests to be executed for each of the at least two separate queues when more than two of the separate queues are provided.

25. A computer system as recited in claim 23, wherein said at least one processor is further programmed to establish a maximum number of threads for executing resource

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acquisition requests in response to the input from the administrator.

26. A computer system as recited in claim 25, wherein the maximum number of threads for executing resource acquisition requests is at least as large as a sum of the first and second numbers.

27. A computer system as recited in claim 26, wherein the first and second numbers are each larger than one.

28. A computer system as recited in claim 27, wherein said at least one processor is further programmed to use a default metering when no input is received from the administrator.

IX. Evidence Appendix

(None)

X. Related Proceedings Appendix

(None)